1: Messing E-5 (1953-1954)1957 MP5 Amhara MP5

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133 the sea. It is here, as C. S. Coon points out[4] that all the historic traffic between the Ethiopian highlands and Yemen has taken place; here lie all the ancient cities and holiest places. Semitic-speaking influences came this way.

(2) Sailing down the Nile with the north wind, and continuing south past the gorges of the Blue Nile. Despite the hardships of this route, Egypt has often been a source of cultural influence on Ethiopia, and once an Ethiopian dynasty reigned over Egypt. Today, Nilotic-speaking tribes live on this gateway.

(3) A route from the south, at the place where the highland of Ethiopia connects with the grasslands and parklands of Kenya and Uganda. Here we find a continuum of flora and fauna, and a human ethnic continuum. Cushitic-speaking peoples have entered this way, probably for ages past.

C. Soil and Minerals

134 The soil of Ethiopia can be roughly divided into three major types:

(1) Decomposed volcanic rock on the central plateau. This is very fertile, of black or dark brown color.

(2) Alluvial soil on the flood plains of streams. This is derived mainly from the decomposed volcanic rock, washed out of the plateau soil during the rainy season, and is very fertile. Muddy in color, the rich overflow of Lake Tana is

4. Coon, C. S.: Horn of Africa. Unpublished.

134 carried down the Blue Nile into Egypt. In Ethiopia, irrigation canals make use of it.

[311] (3) The remaining, eroded, red loam soil, of little fertility. This is left to the bush or is used for grazing.[5]

135 There is little information on the mineral wealth of Ethiopia, since whatever there is, particularly gold, has been kept from the knowledge of outsiders. The Italians had merely begun their surveys when they had to leave the country. Salt has always been a major item of import from the border lowlands in the east to the highland plateau. Numerous volcanic mineral springs, used for healing since ancient times, exist in many plateau districts.

[326] Since ancient times, gold from the sand gravels of Wollega and southern provinces was sold in small nuggets, or fashioned by goldsmiths into rings and sold by weight. It is now a monopoly of the central government; goldsmiths have been drawn to Addis Ababa, where they now use modern methods.

D. Flora, Fauna: their significance in Ethiopian Ecology.

137 The generosity of nature on the highland plateau has provided a basis for human subsistence with little effort. In addition to a healthful climate and fertile soil, resources of vegetation and animal life are abundant.

137 241 Economic botanists have conducted studies which indicate that the highlands of Ethiopia contain a number of indigenous varieties of cultivated cereals and legumes. Some are of the opinion that these highlands even formed one of the PRIMARY

5. Chamber of Commerce of Addis Ababa: Guidebook of Ethiopia, 1954, p. 127-8.

244 topography provides for a variety of climate at a minimum of distance, is very favorable to diversified agriculture. But, as indicated before, the uses of power have not developed in millenia. Much land is permitted to lie fallow, and slash-and-burn methods are used when old soil becomes exhausted and new lands are needed. Therefore, apart from market villages, no settlements remain on the same spot for as much as a century, usually. The fields are not fertilized; manure from cattle is used as fuel. However, irrigation, though not intensive; terrace farming since ancient times; and the use of a wooden scratch plow with iron tip, give the Amhara agricultural picture an old-Middle Eastern character. Also Middle Eastern is the fact that among the Amhara and other north Abyssinians cereals are the most important field crops.

Ninety-five percent of the population of Ethiopia depends on farming and stock raising.[60] European estimates [134] indicate that half the land territory of Ethiopia is arable. Despite much erosion, the depth of the subsoil is regarded as unusually deep. But much good land is left fallow, because there is enough land for the low density of the population; and because life is fairly comfortable at the old standards of living, especially now that ravaging armies of hungry soldiers seem a thing of the past. Thus, there is little urge for increased production, except by proclamation from the central authority from Addis Ababa which has tried to stimulate it with only modest success. The reason for this lack of success is that the farmer argues, with [311]

60. Underhill, C.T.: Industry in Ethiopia,1950, p. 21.

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very few need to be removed by hand; "fär" is the first furrow in a field.

deep plowing - "shäräkkätä", in order to raise good soil.

final plowing - "zärrä", just before or after seeding.

●134 823 Numerous distinctions are made between types of soil, so that every member of the extended family receives his share of both good or poor soil. Fertility is basically categorized into the aforementioned "läm tyēff" and "tyēff" types. Finer distinctions show awareness of conservation needs:

male soil ("wändē märēt") - any heavy, humus-rich, fertile soil.

female soil (ʔyētē märēt") - any light, especially sandy soil. Less fertile.

dark soil - "walka", used for luxury grain such as wheat.

sandy soil - "mwaçhçhärä", must be lightly plowed so as not to blow away.

mobile soil - "lel märēt", easily eroded, often left fallow for that reason.

poorly draining soil - "ränkwa märēt", or "ambaza", gets muddy easily and then becomes difficult to plow.

eroded land - "borbor märēt", with many crevasses, "eaten by water" during the rainy season.

1: Messing E-5 (1953-1954)1957 MP5 Amhara MP5

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alluvial soil - "borbwara märēt", rich silt carried by rivers and brooks.

infertile soils - "qoda märēt" dries too quickly after rains;
"arbacha märēt", reddish, after erosion, infertile mounds;
"gebgaba märēt", harvest withers at stalk before maturity;
"gergera märēt", useless to plow, better leave for wild fruit.
"fech märēt", abandoned land, leave for pasturage.

hard-to-penetrate - "gewchacha märēt", plow cannot penetrate readily,
"gombore märēt", sandy but very rocky, hard to plow,
"chancha märēt" rocky terrain, where rain does not penetrate well.

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The preferred early rain is the light, intermittent but penetrating "zeg yalä zenāb", not the heavy continuous downpour that occurs later. Fast-growing barley, called

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"bällega" after the "bälg" season, is sown first, during the light rains of March, for it can be harvested 3 months later, just before the heavy rains, to help tide the people over until the main harvests. This is very important because of the traditional hesitancy of the farmer to store crops. Historically, he would rather have it almost ready on the stalk, and would rather risk a crop failure than

3: Buxton Y-5 (1946-1948)1949 MP5 Amhara MP5

of running water, and appeal to such *Dei ex machina* as marine action and waves of translation, cannot see a few such marks of the handiwork of rain and rivers as are shown by these gorges. There is not the slightest possibility, as far as I can see, of explaining their origin by any other force than that of the streams flowing in them. Any faulting or dislocation of the rocks is out of the question, there is no evidence of glacier action at any past time, and even the most fervent apostle of marine denudation would scarcely credit it with the formation of a Titanic trench three-quarters of a mile deep and very little more in breadth."

This description would apply equally to the gorges found in other parts of the Ethiopian highlands, for they are all, as far as I have seen, remarkably similar; and no geologist would now question their formation by stream erosion.

The formations of Blanford's area were called by him the Magdala group of "Traps"—an enormously thick, practically horizontal layer of lava flows. They were especially characterized by bands of trachyte, often columnar, weathering to form steep scarps. These formations are probably of late- or post-Cretaceous age, since Blanford's Ashangi Traps (upon which the Magdala group lies unconformably) were tentatively attributed by him to the Upper Cretaceous. Referring to the Magdala Traps Blanford says: "It is highly probable that the Trap rocks of Shoa belong, in part at least, to this group", his belief being based on some descriptions of Rocher d'Hericourt, who travelled in Shoa in the 1840's. My own limited observations confirm this assumption, except that in our area the most conspicuous cliffs and scarps consisted of columnar basalt, not trachyte. The area shown on the map consists of alternating harder and softer layers of volcanic rocks, including basalts, trachytes and tuffs (the latter often used, as in Kenya, for building). They dip slightly to the north-west.

The plateau, which occupies most of the sheet, lies everywhere above 9000 feet. It enjoys a temperate climate, and frosts are not uncommon in December and January. It is swept by easterly winds throughout the year, except when rain is actually threatened or falling, when it commonly turns right round to the west—a frequent occurrence during the long rainy season (June to September). The volcanic rocks have given rise to deep and potentially very fertile soils. The high plateau is mostly short grassland with very little bush, except in places protected both from wind and grazing animals, and very few trees except for small clumps of introduced Eucalyptus which mark almost every inhabited place. Owing to the scarcity of timber a dung-fuel known as *kubat* is usually burnt. At first sight the plateau appears very thinly populated but this, as will be shown, is an illusion. Anything like a village is rare, but isolated homesteads occur almost everywhere on rising ground. Nearly all this country makes good grazing for cattle, sheep and goats, and it is high enough for horses to flourish. Perhaps a third of it is more or less cultivable, though the area under cultivation in any one year is much less. Owing to cold and exposure very few crops flourish on the plateau itself, the principal ones being barley and broad beans.

The natural flora of the high plateau is not rich, though in rocky, sheltered spots a succession of attractive herbs and shrubs, including Jasmine, a yellow